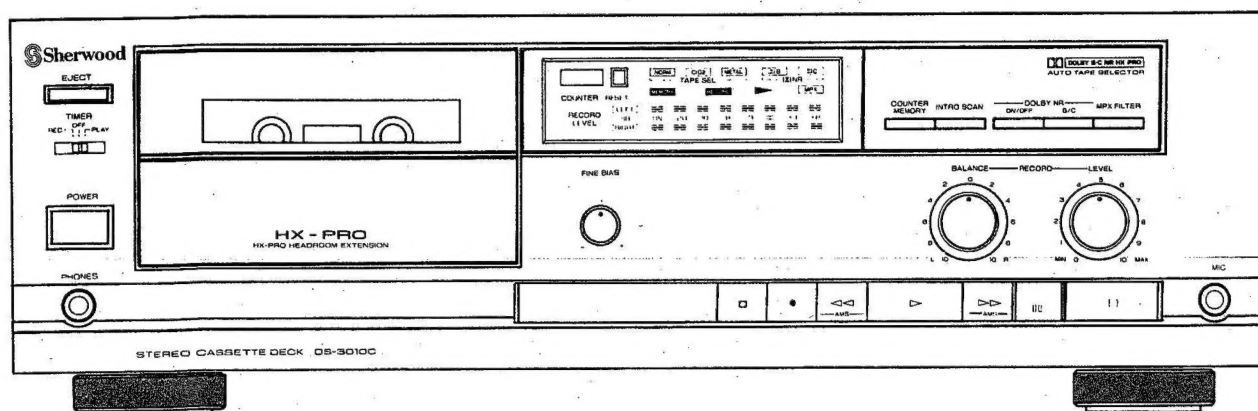


# SERVICE MANUAL

## DS-3010C

### STEREO CASSETTE DECK



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 **Sherwood**

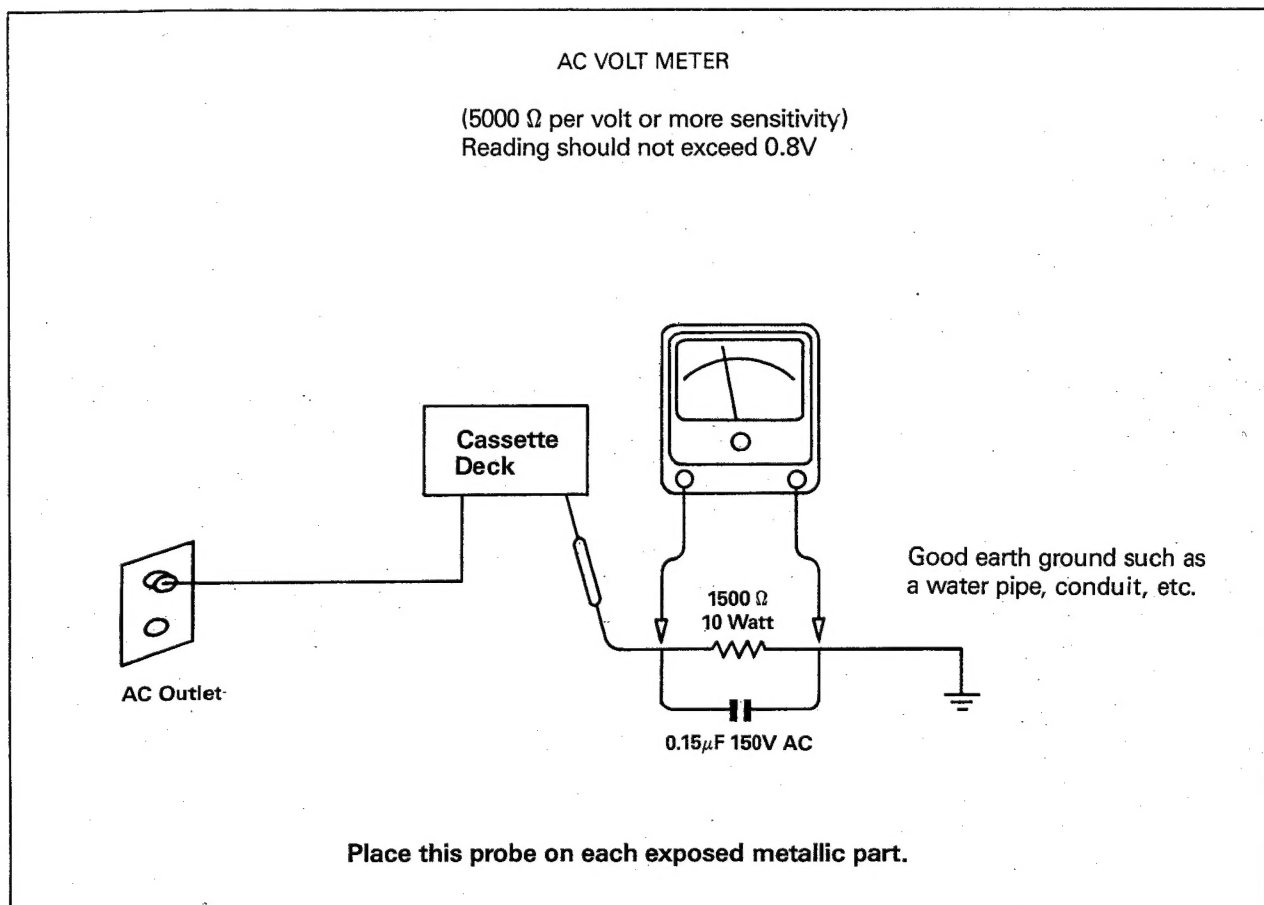
# Safety Precaution

## WARNING

Service should not be attempted by anyone unfamiliar with the necessary precautions on this player. The following precautions are necessary during servicing.

1. Many electrical and mechanical parts in this player have special characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristic are identified in this manual and its supplements: electrical components having such features are identified by a  $\Delta$  in the schematic diagram and the parts list.  
Before replacing any of these components, read the parts list in this manual carefully.  
The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.
2. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as

terminals, screwheads, metal overlays, etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (**120V Version only**). (Do not use a line isolation transformer during this check.) Use an AC voltmeter having 5000  $\Omega$  per volt or more sensitivity in the following manner:  
Connect a 1500  $\Omega$  10 watt resistor paralleled by a 0.15 $\mu$ F, 150V AC capacitor, between a known good earth ground (water pipe, conduit, etc) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500  $\Omega$  resistor and 0.15 $\mu$ F capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

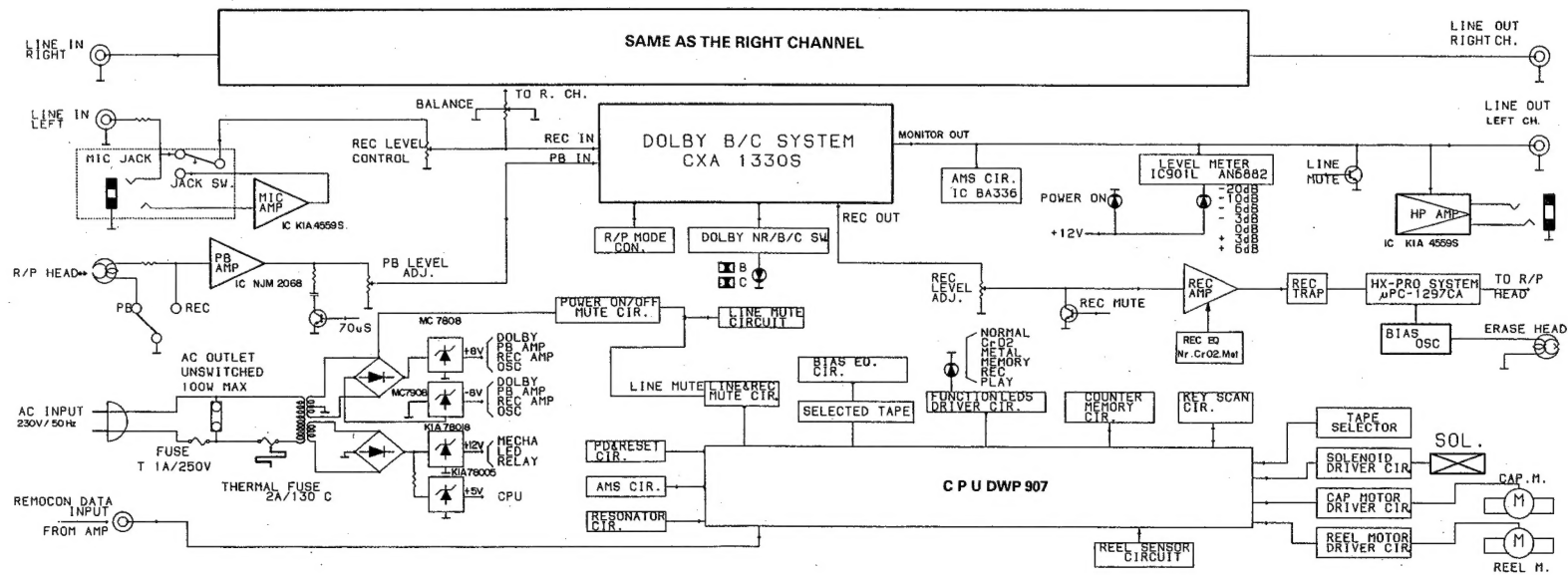


# Specifications

Type	Logic front loading stereo cassette deck with *Dolby B/C NR HX-PRO system
Track system	4 track, 2 channel stereo recording/playback
Recording system	AC bias system (Bias frequency: 85kHz)
Erasing system	AC system
Tape speed	1-7/8 ips (4.76 cm/s)
Heads	Hard permalloy Hyperbolic recording/playback head×1 Double gap erasing head×1
Motor	1-Electronic governor controlled DC motor, 1-High Torque DC Motor (Reel)
Mechanism	2-Motor, 1-Solenoid Mechanism
Fast winding Time	Approx. 120 seconds with C-60 cassette tape
Frequency Response at -20dB Rec/PB	<ul style="list-style-type: none"> <li>• Normal : 30-18,000Hz 35-17,500Hz at <math>\pm 3</math>dB</li> <li>• CrO<sub>2</sub> : 30-18,500Hz 35-18,000Hz at <math>\pm 3</math>dB</li> <li>• Metal : 30-19,000Hz 30-18,500Hz at <math>\pm 3</math>dB</li> </ul>
Dolby NR off	Metal tape 30-16,000Hz at $\pm 3$ dB
0dB Rec/PB	<ul style="list-style-type: none"> <li>• Dolby NR off 55dB at Normal tape (weighted) 56dB at CrO<sub>2</sub> tape 57dB at Metal tape</li> <li>• Dolby B NR 64dB at Normal tape (weighted) 65dB at CrO<sub>2</sub> tape 66dB at Metal tape</li> <li>• Dolby C NR 73dB at Normal tape (weighted) 74dB at CrO<sub>2</sub> tape 76dB at Metal tape</li> </ul>
Signal to noise ratio at Rec/PB	
Third harmonic distortion	Less than 1.0% at 1kHz, 0dB Rec/PB
Input sensitivity/impedance	Line 80mV/47k $\Omega$ , MIC 0.4mV/4 ohms
Output level/impedance;	Line 500mV/1.5k $\Omega$ Headphone 700mV at load 600 $\Omega$
Power consumption	25W
Power requirements;	(A): 120V 60Hz for USA/Canadian version (B): 120/220V 60/50Hz for multi-voltage version (switchable) (C): 220V 50Hz for general European version (D): 220V 50Hz for west Germanian & Italian version (E): 240V 50Hz for British & Australian version (F): 220V 50Hz for Swiss & Scandinavian version
Dimensions;	440(W)×125(H)×245(D) mm 17.3(W)×4.9(H)×9.6(D) inch
Weight (Net)	4.6 kg (10.1 lbs)

**Note:** Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the European standard, and provides information on regional circuit modification through use of alternate schematic diagram, and information on regional component variations through use of parts list. Design and Specifications subject to change without notice for improvement.

# Block Diagram





# Alignment Procedures

## 1. Before Measurements and Adjustment

The following general conditions apply to the electrical measurements and adjustments unless especially stated otherwise.

- Dolby NR push switch off.
- Volume control: Recording level VR301L/R max.
- Valance volume VR901 center.
- Use 500mV (200nwb/m) for 0dB as the standard level of the unit.
- Test tape
  - TCC-155 \_\_\_\_\_ Azimuth (14kHz, -20dB)
  - TCC-112 \_\_\_\_\_ Tape speed (3.15kHz, -10dB)
  - TCC-130 \_\_\_\_\_ Playback level (Dolby ref. tape 400Hz, 0dB)
  - TCC-184 \_\_\_\_\_ Playback freq. response
- Reference Tape
  - Normal \_\_\_\_\_ TDK AD-60
  - CrO<sub>2</sub> \_\_\_\_\_ TDK SA-60
  - Metal \_\_\_\_\_ TDK MAX-60

## Playback Section

Adjustments	Test tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to
Head Azimuth	TCC-155 14 kHz (A.BEX)	Play		Line output	ACmV-meter Oscilloscope	Head adjusting screw (left side)	Max. <sup>*a</sup> • Lissajous' figure become a straight line with an angle 45 degrees
Tape Speed	TCC-112 3.15kHz -10dB (A.BEX)	Play		Line output	Wow and Flutter Meter & Frequency Counter	The inner VR Motor	<sup>*b</sup> Approx. center position 3.15kHz ± 15Hz
Playback Level	TCC-130 400Hz 0dB (A.BEX)	Play		Line output	ACmV-meter Oscilloscope	VR101L/R	500mV
Playback frequency response	TCC-184 (A.BEX)	Play		Line output	ACmV-meter Oscilloscope		See graph Fig.2 freq. response

## Recording Section

Adjustments	Test tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to
Bias OSC Frequency	MAX-60 (TDK)	Rec/Pause		White color lead wire of CNT202	Frequency Counter	OSC L501	85kHz, red colour
85kHz trap suppression	MAX-60 (TDK)	Rec/Pause		3J75 3J129	ACmV-meter Oscilloscope	L200L/R	Minimize the reading on ACVM
Target value Bias	Metal MAX-60	Rec/Pause		3J84 3J85	ACmV-meter Oscilloscope	VR281	9.4 mV
	CrO <sub>2</sub> SA-60					VR282	6.3mV
	Normal AD-60					VR251L/R	4.1mV

Adjustments	Test tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to
Recording Level	AD-60 (TDK)	Source	400Hz to Line	Line output	ACmV-meter Oscilloscope	LF generator	500mV *c
		Tape Rec/ Pause				VR201L/R	
Bias		Tape Rec/ Pause	400Hz to Line	Line output	ACmV-meter	See target value bias	See Fig. 3 *d if it necessary repeat bias adjust.
			4kHz-6.3kHz 10kHz-12kHz 14kHz-16kHz to line in		Record/Playback a number of frequency with the same input voltage.		
Level meter	Arbitrary tape	Source	400Hz to Line in	0 Level Point	ACmV-meter Oscilloscope	VR101L/R	0 mark
19kHz Suppression	Arbitrary tape	Rec/ Pause	400Hz to Line in	Line output		LF generator	500mV
			19kHz to Line in			MPXL151L/R	Minimize the reading on ACVM

Note:

\*a. Prior to any measurement or adjustment with the tape running heads and tape guides should be degaussed and cleaned. Confer see Figure Electrical Adjustment Point.

\*b. The max permissible speed variation  $\pm 1$ dB. Moreover the wow and flutter can be read. This value should not exceed 0.1%.

\*c. The voltage on line out should read 500mV  $\pm 20$ mV. If this is not the case reduce the LF signal (bias disabled by as many dB's as the reading was too low or too high means of VR101L/R).

\*d. When the channel is adjusted this may slightly affect the adjustment of the other channel. If the adjustment is correct the frequency response curve will be similar in Fig. 4 distortion 3%.

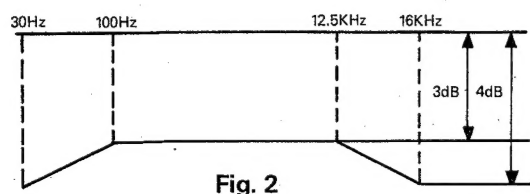


Fig. 2

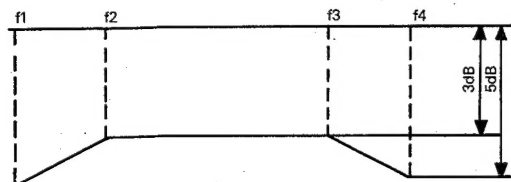


Fig. 3

	f1	f2	f3	f4
Metal	30Hz	100Hz	12.5kHz	15.5kHz
CrO <sub>2</sub>	30Hz	100Hz	12.5kHz	15.0kHz
Normal	30Hz	100Hz	12.5kHz	15.0kHz

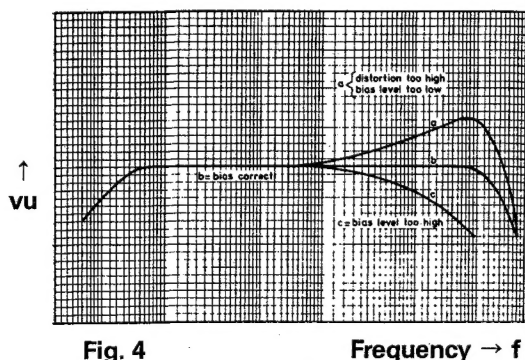
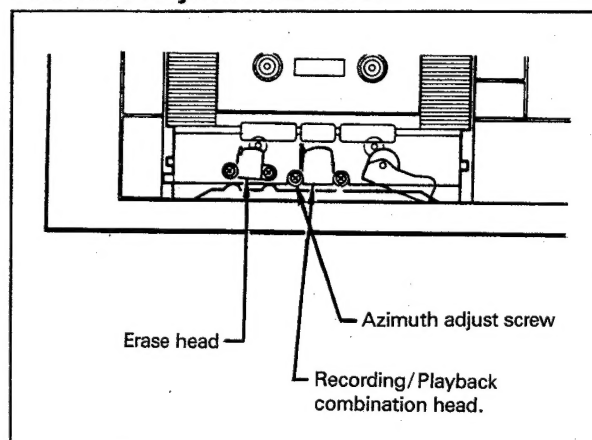


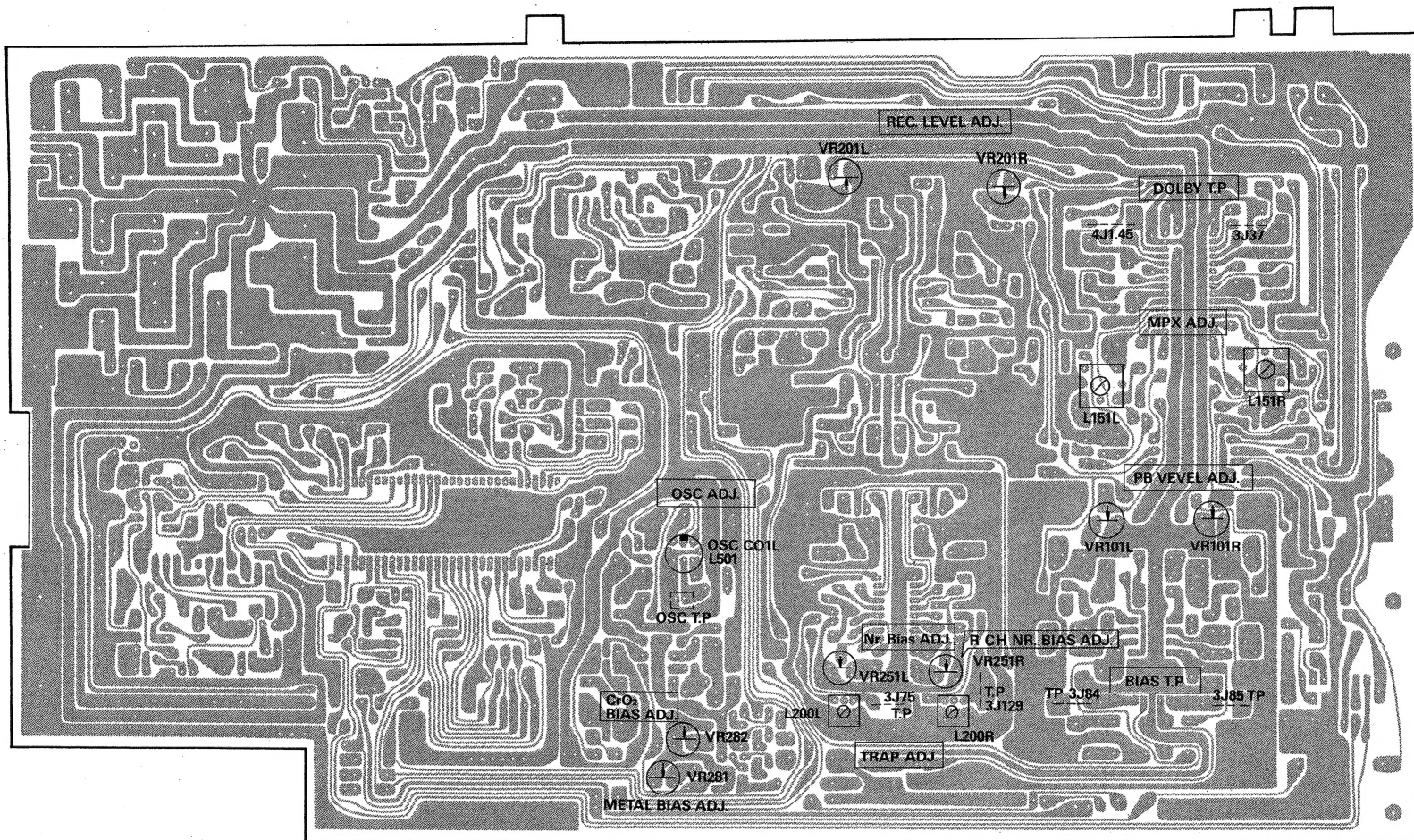
Fig. 4

Frequency  $\rightarrow$  f

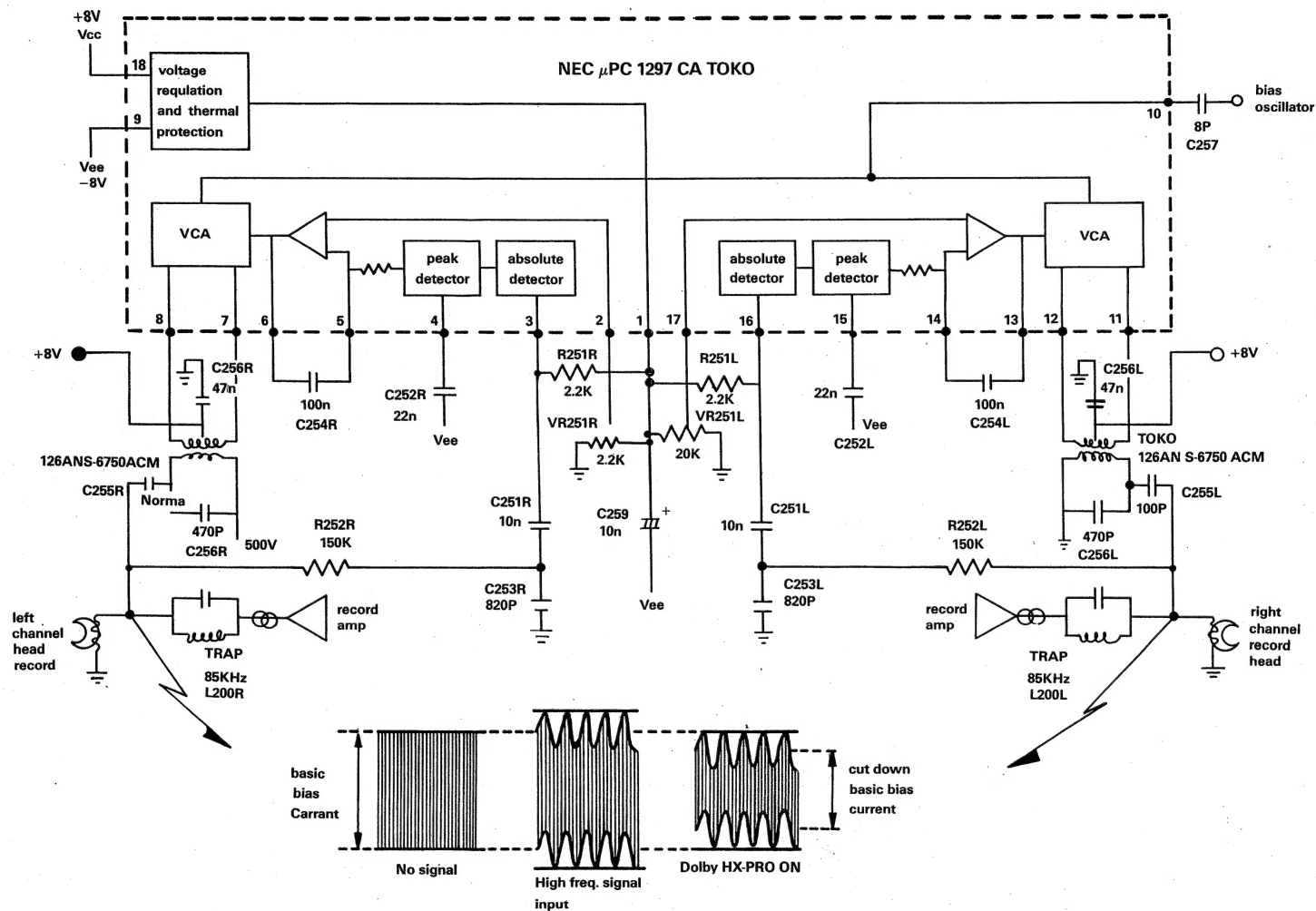
### Azimuth Adjustment Point



Alignment point



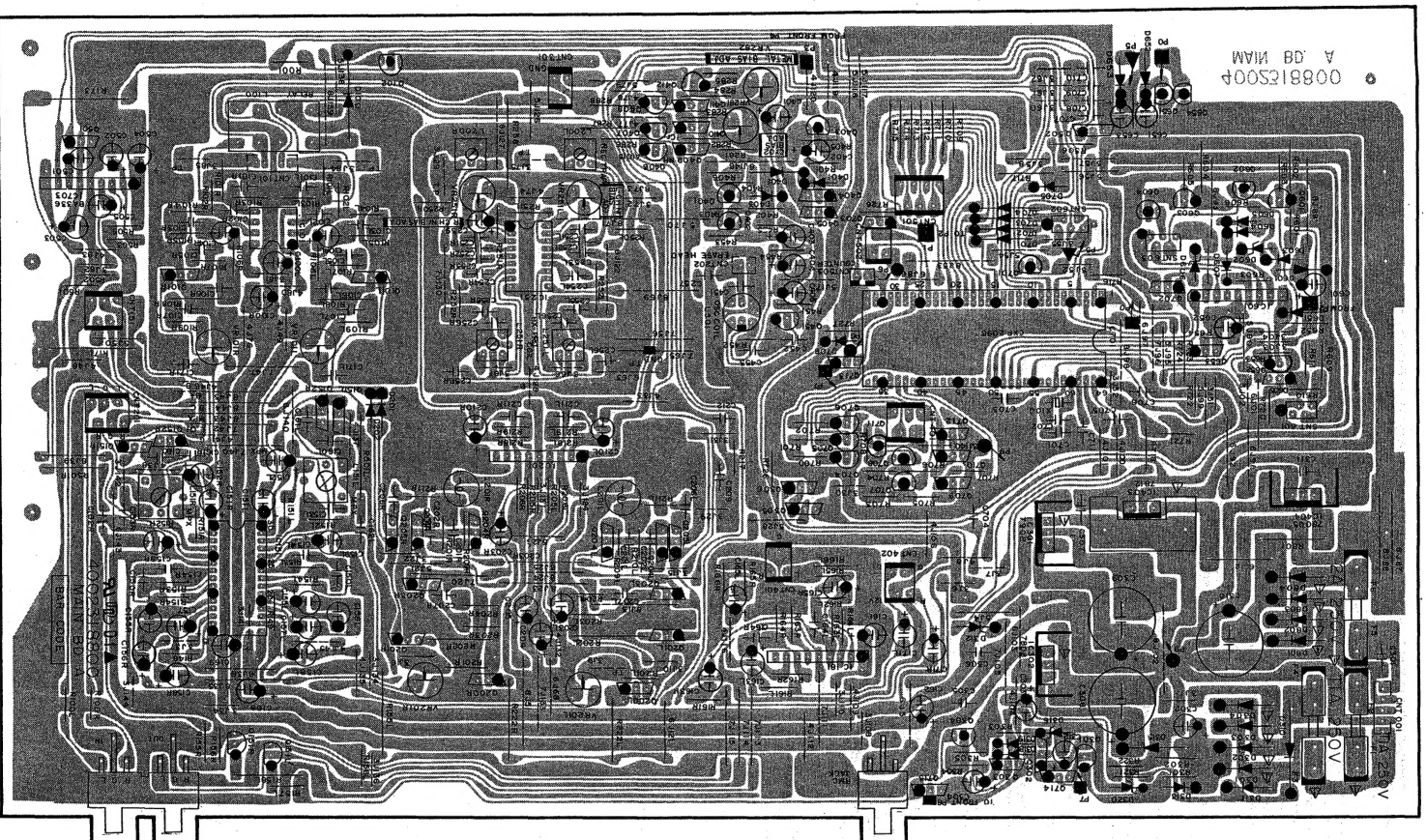
Integrated Circuit Implementation with  $\mu$ PC 1297 CA: IC251



## P.C. Boards (Top & Bottom Views)

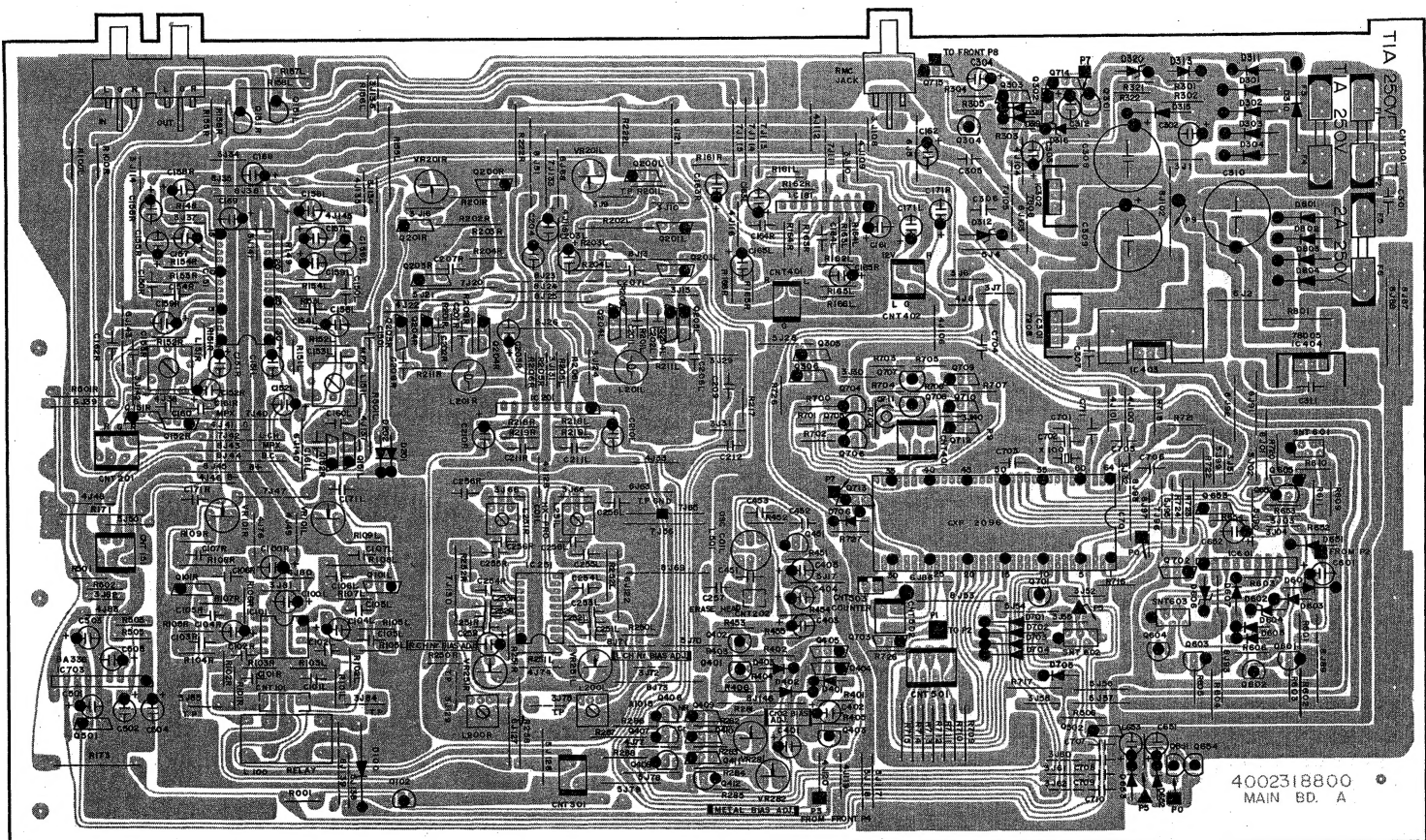
**MAIN P.C. BOARD 4002318800**

**(TOP VIEW)**



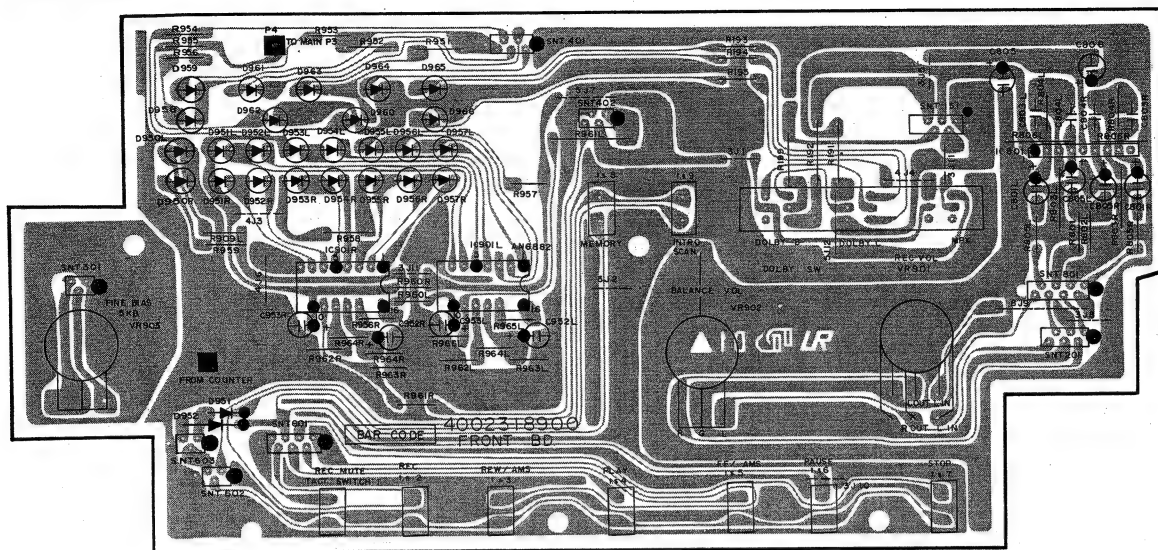


(BOTTOM VIEW)

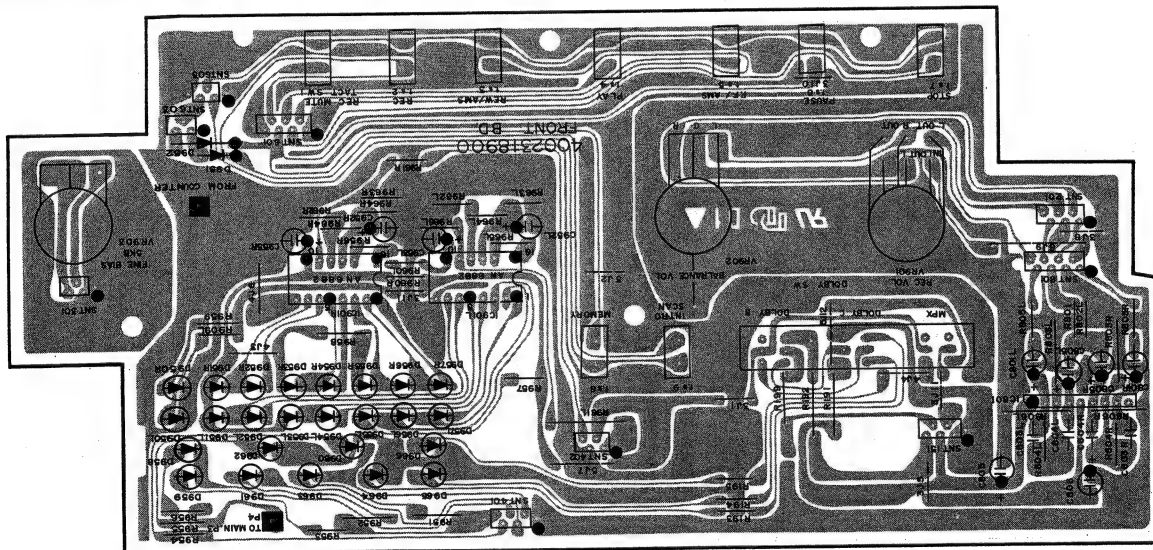


# FRONT P.C. BOARD 4002318900

(TOP VIEW)

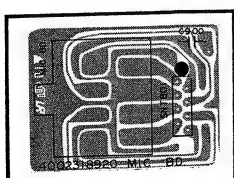


(BOTTOM VIEW)

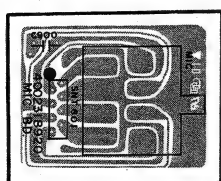


## MIC P.C. BOARD 4002318920

(TOP VIEW)

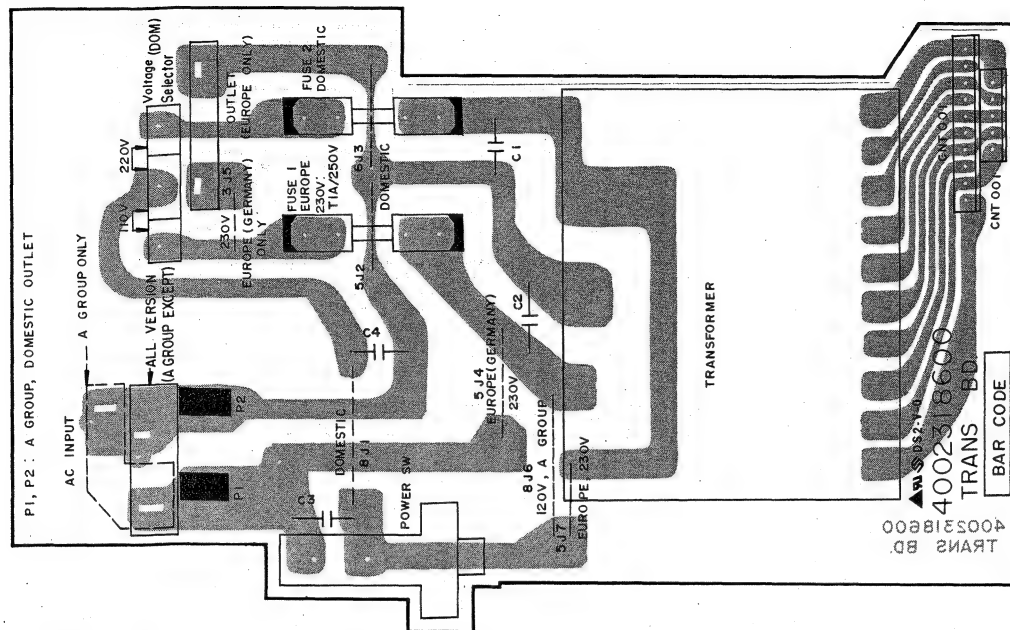


(BOTTOM VIEW)

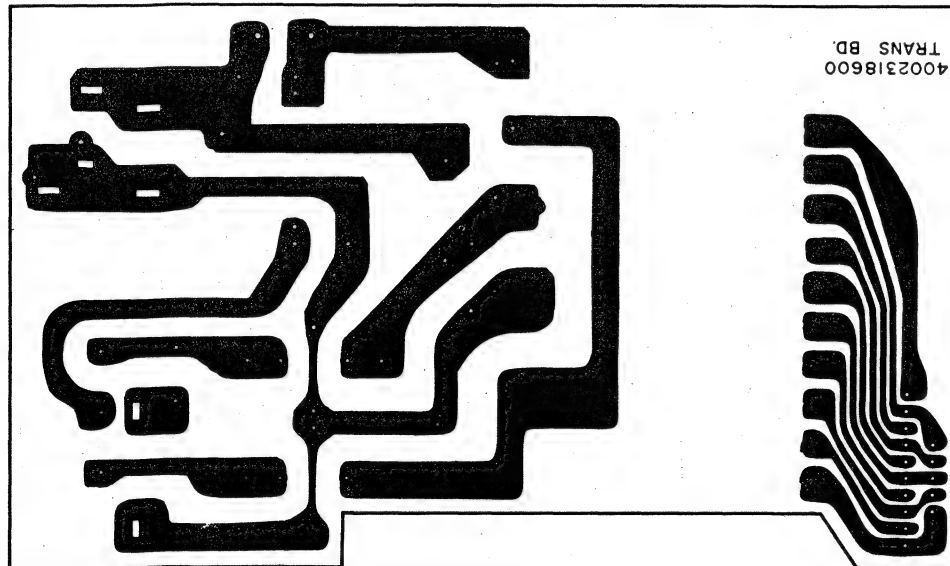


# TRANS P.C. BOARD 4002318600

(TOP VIEW)

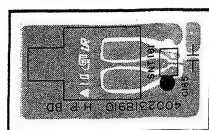


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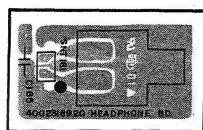


## H.P. P.C. BOARD 4002318910

(TOP VIEW)

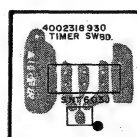


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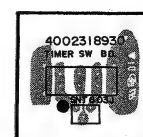


## TIMER SW P.C. BOARD 4002318930

(TOP VIEW)

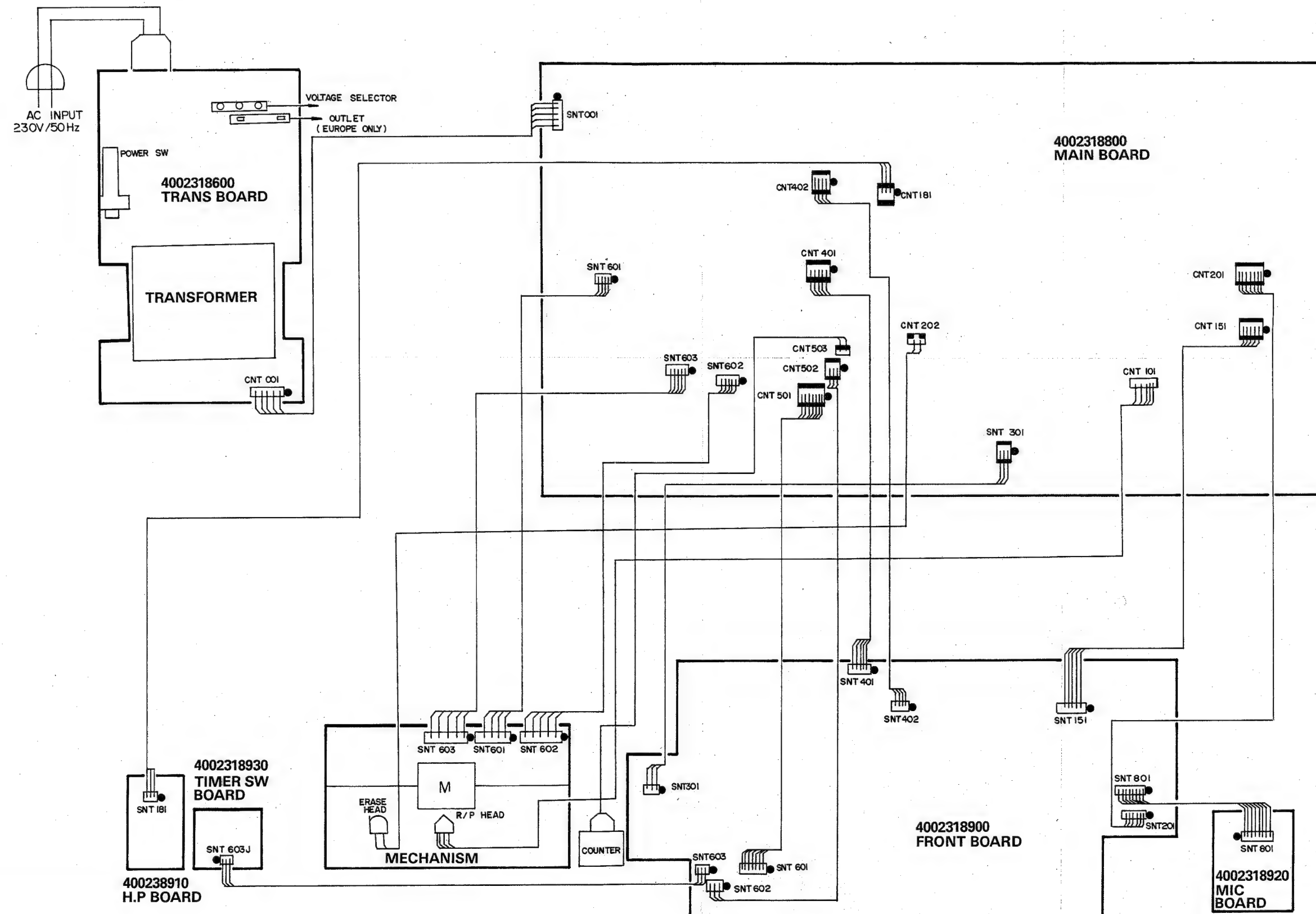


(BOTTOM VIEW)

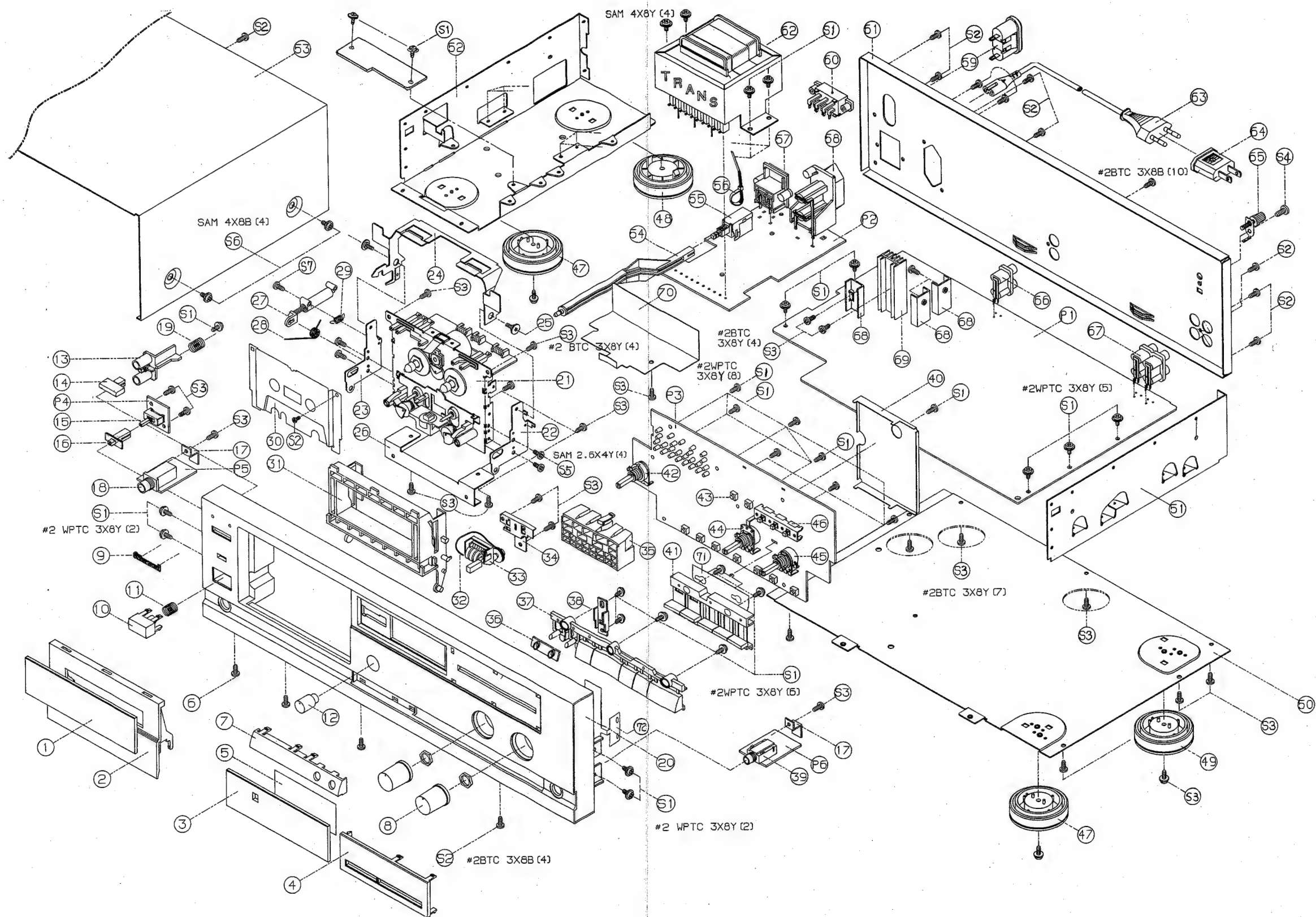




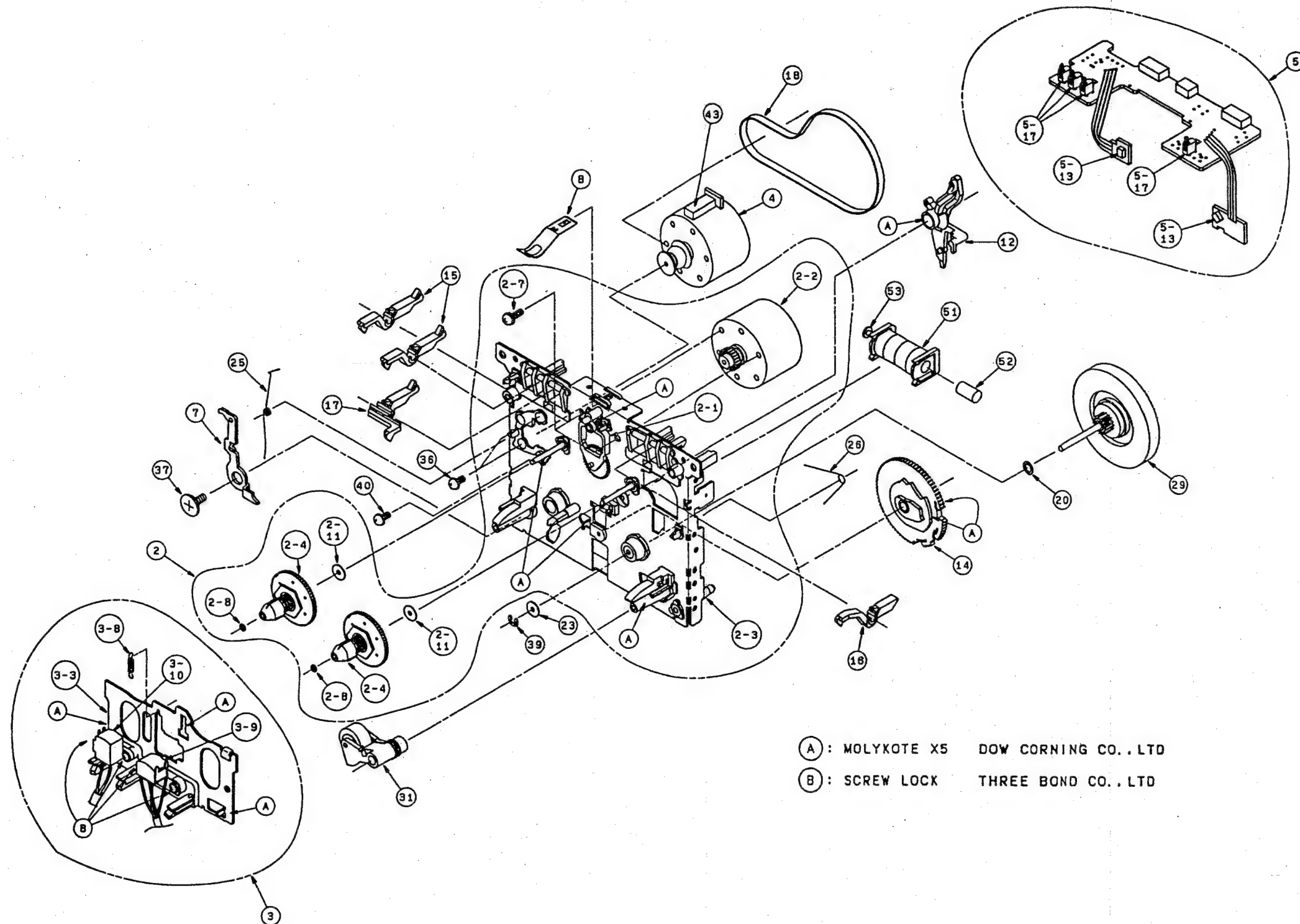
# Wiring Diagram



## Exploded View (Cabinet & Chassis)



# **Exploded View (Deck Mechanism Ass'y)**



(A) : MOLYKOTE X5    DOW CORNING CO., LTD  
 (B) : SCREW LOCK    THREE BOND CO., LTD

# Electrical Parts List

PRODUCT SAFETY NOTICE: Products marked with  $\Delta$  have special characteristics important to safety. If you replace any of these components, carefully read the product safety notice of this manual. Don't degraded the safety of the product through improper servicing. Remark meaning for version, therefore refer to power requirement of Specifications in this manual. Resistors & Capacitors tolerance, D ( $\pm 5\%$ ), J ( $\pm 0.5\%$ ), K ( $\pm 10\%$ ), M ( $\pm 20\%$ ), Z (+80%, -20%).

Ref. No	Part No.	Description	Remark
Main Board 4002318800			
Capacitors			
C100L/R	3479210121	Electric SA 100 $\mu$ F 10V M	
C101L/R	3579681130	Ceramic 680pF 50V J	
C102L/R	3579612130	Ceramic 120pF 50V J	
C103L/R	3679223120	Mylar 0.022 $\mu$ F 50V J	
C104L/R	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C105L/R	3679223120	Mylar 0.022 $\mu$ F 100V J	
C106L/R	3679102534	Ceramic 1000pF 50V J	
C107L/R	3679273120	Mylar 0.027 $\mu$ F 100V J	
C108-149		Not used !	
C150L/R	3679222120	Mylar 0.0022 $\mu$ F 100V J	
C151L/R	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C152L/R	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C153L/R	3679472120	Mylar 0.0047 $\mu$ F 100V J	
C154L/R	3679222120	Mylar 0.0022 $\mu$ F 50V J	
C155L/R	3679256871	Electric SA 0.56 $\mu$ F 50V M	
C156L/R		Not used !	
C157L/R	3479233871	Electric SA 0.33 $\mu$ F 50V M	
C158L/R	3679247971	Electric SA 4.7 $\mu$ F 50V M	
C159L/R	3479210071	Electric SA 10 $\mu$ F 50V M	
C160L/R	3579102130	Ceramic 0.001 $\mu$ F 50V E	
C161/C162	3479210121	Electric SA 100 $\mu$ F 10V M	
C163L/R	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C164L/R	3579121130	Ceramic 120pF 50V J	
C165L/R	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C166L/R	3679182120	Mylar 0.0018 $\mu$ F 100V J	
C171L/R	3579681130	Ceramic 680pF 50V J	
C172L/R	3579104530	Ceramic 0.1 $\mu$ F 50V Z	
C173-C180		Not used !	
C181L/R	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C201L/R	3679153120	Mylar 0.015 $\mu$ F 100V J	
C202L/R	3479123120	Mylar 0.012 $\mu$ F 100V J	
C203L/R	3479210971	Electric SA 1 $\mu$ F 50V M	
C204/C205	3479210121	Electric SA 100 $\mu$ F 10V M	
C206L/R	3679153120	Mylar 0.015 $\mu$ F 100V J	
C207L/R	3479472120	Mylar 0.0047 $\mu$ F 100V J	
C208/C209		Not used !	
C210L/R	3479210171	Electric SA 10 $\mu$ F 50V M	
C211L/R	3479222871	Electric SA 0.22 $\mu$ F 50V M	
C212-250		Not used !	
C251L/R	3579103130	Ceramic 0.01 $\mu$ F 50V Z	
C252L/R	3679223120	Mylar 0.022 $\mu$ F 100V J	
C253L/R	3579821130	Ceramic 820pF 50V J	
C254L/R	3679273120	Mylar 0.027 $\mu$ F 100V J	
C255L/R	3579101130	Ceramic 100pF 100V J	
C256L/R	3579471250	Ceramic 470pF 500V J	
C257	3579080010	Ceramic 8pF 50V C	
C258L/R	3679473120	Mylar 0.047 $\mu$ F 100V J	
C301	3679473120	Mylar 0.047 $\mu$ F 100V J	
C302-C304	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C305-C307		Not used !	
C308	3409222239	Electric SA 2200 $\mu$ F 25V M	
C309	3409210231	Electric SA 1000 $\mu$ F 25V M	

Ref. No	Part No.	Description	Remark
C310	3409233241	Electric SA 3300 $\mu$ F 35V M	
C311	3679473120	Mylar 0.047 $\mu$ F 100V J	
C312	3479210121	Electric SA 100 $\mu$ F 10V M	
C401	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C402	3479233039	Electric SA 33 $\mu$ F 16V M	
C403	3479233041	Electric SA 33 $\mu$ F 25V M	
C404/C405	3479233039	Electric SA 33 $\mu$ F 16V M	
C406-C450		Not used !	
C451/C452	3679183120	Mylar 0.018 $\mu$ F 100V J	
C453	3679472120	Mylar 0.047 $\mu$ F 100V J	
C501	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C502	3479268871	Electric SA 0.68 $\mu$ F 50V M	
C503	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C504	3479233871	Electric SA 0.33 $\mu$ F 50V M	
C505	3479210971	Electric SA 1 $\mu$ F 50V M	
C601	3479233039	Electric SA 33 $\mu$ F 16V M	
C651	3479210071	Electric SA 10 $\mu$ F 50V M	
C652	3479233039	Electric SA 33 $\mu$ F 16V M	
C653	3479247971	Electric SA 4.7 $\mu$ F 50V M	
C701/C702	3529330210	Ceramic CH 33pF 50V J	
C703	3579104530	Ceramic 0.1 $\mu$ F 50V Z	
C704		Not used !	
C705-C711	3579104530	Ceramic 0.1 $\mu$ F 50V Z	
Connectors			
CNT001	4428525510	Plug 5P	
CNT101	4428525850	Plug 5P	
CNT151	4428525260	Wire Trap 5P	
CNT201	4428525270	Wire Trap 6P	
CNT301	4428525240	Wire Trap 3P	
CNT401	4428525240	Wire Trap 3P	
CNT402	4428525250	Wire Trap 4P	
CNT403	4428525260	Wire Trap 5P	
CNT501	4428525280	Wire Trap 7P	
CNT502	4428525240	Wire Trap 3P	
CNT503	4428517510	Wire Plug 2P	
SNT601	4428525380	Wire holder 4P	
SNT602	4428525390	Wire holder 5P	
SNT603	4428525390	Wire holder 5P	
	4358504222	Slat Cables GS S-0422SL	
	4358504221	Slat Cables GS S-0522SL	
Coils			
L100	5528001020	Relay RY 12W-K	
L151L/R	2638301110	Dolby MPX Filter, 19kHz 85kHz	
L200L/R	2658501100	REC Trap, 85kHz	
L201L/R	2648601220	Inductor 6.3mH	
L251L/R	2638601240	Dolby HX-PRO	
L501	2638201250	Bias OSC, 85kHz	

Ref. No	Part No.	Description	Remark
Diodes			
D100	2058106100	1N400	
D201/D202	2058306101	1N4148	
D301-D304	2058106100	1N4002	
D305-D309		Not used !	
D310/D311	2058106100	1N4002	
D312	2258522110	Zener DZ5.1BM	
D313	2058306101	1N4148	
D314/D317		Not used !	
D315	2058106100	1N4002	
D316	2258522112	Zener DZ6.2BM	
D318/D319	2058306101	1N4148	
D320	2258522112	Zener DZ6.2BM	
D401-D403	2058306101	1N4148	
D601	2058306101	1N4148	
D602	2258522112	Zener DZ 6.2BM	
D603	2058306101	1N4148	
D604/D605	2058306101	1N4148	
D606	2258522108	Zener DZ4.3BM	
D607	2058306101	1N4148	
D651-D653	2058306101	1N4148	
D701-D706	2058306101	1N4148	
Fuses			
F1-F6	4255001010	Fuse Clip	
F1-F2	5508302035	T 1A 250V	
F3	5508302435	T 2A 250V	
IC's			
IC101	2168020106	NJM 2068, Play	
IC151	2168022123	CXA 1330S, Dolby	
IC181	2168206103	KIA 6559S, Headphone	
IC201	2168206103	KIA 6559S, REC	
IC251	2168013111	$\mu$ PCI297CA, REC	
IC301	2168602120	MC7908, Regulator	
IC302	2168620101	MC7908, Regulator	
IC403	2168606104	KIA78012AP, Regulator	
IC404	2168606103	KIA78005AP, Regulator	
IC601	2168007204	TA 7291S, Motor	
IC701	2138322101	DWP 907, CPU	
IC703	2168022105	BA 336, AMS	
Resistors: Resistors are 1/5W carbon film $\pm 5\%$ tolerance, unless otherwise specified. M is metal film, M.O is metal oxide and C is cement type.			
R001	3069222970	2.2k $\Omega$	
R100L/R	3069243970	24k $\Omega$	
R101L/R	3069100970	10 $\Omega$	
R102L/R	3069470970	47 $\Omega$	
R103L/R	3069104970	100k $\Omega$	
R104L/R	3069152970	1.5k $\Omega$	
R105L/R	3069104970	100k $\Omega$	
R106L/R	3069222970	2.2k $\Omega$	
Ref. No	Part No.	Description	Remark
R107L/R	3069272970	2.7k $\Omega$	
R108L/R	3069103970	10k $\Omega$	
R109L/R	3069103970	10k $\Omega$	
R148	3069273970	27k $\Omega$	
R149	3069102970	1k $\Omega$	
R151L/R	3069222970	2.2k $\Omega$	
R152L/R	3069822970	8.2k $\Omega$	
R153L/R	3069243970	24k $\Omega$	
R154L/R	3069561970	560 $\Omega$	
R155L/R	3069242970	2.4k $\Omega$	
R156L/R	3069562970	5.6k $\Omega$	
R157L/R	3069332970	3.3k $\Omega$	
R161L/R	3069470970	47 $\Omega$	
R162L/R	3069202970	2k $\Omega$	
R163L/R	3069473970	47k $\Omega$	
R164L/R	3069392970	3.9k $\Omega$	
R165L/R	3069100970	10 $\Omega$	
R166L/R	3069103970	10k $\Omega$	
R171	3069473970	47k $\Omega$	
R172		Not used !	
R173	3069102970	1k $\Omega$	
R201L/R	3069103970	10k $\Omega$	
R202L/R	3069913970	91k $\Omega$	
R203L/R	3069273970	27k $\Omega$	
R204L/R	3069203970	20k $\Omega$	
R205L/R	3069563970	56k $\Omega$	
R206L/R	3069472970	4.7k $\Omega$	
R207L/R		Not used !	
R208	3069221970	220 $\Omega$	
R209L/R	3069151970	150 $\Omega$	
R211L/R		Not used !	
R217		Not used !	
R218L/R	3069564970	560k $\Omega$	
R219L/R	3069752970	7.5k $\Omega$	
R220/R221		Not used !	
R222L/R	3069222970	2.2k $\Omega$	
R223-R249		Not used !	
R250L/R	3069562970	5.6k $\Omega$	
R251L/R	3069222970	2.2k $\Omega$	
R252L/R	3069154970	150k $\Omega$	
R253-R257		Not used !	
R258	3069222970	2.2k $\Omega$	
R259-R280		Not used !	
R281	3069104970	100k $\Omega$	
R282	3069222970	2.2k $\Omega$	
R283	3069102970	1k $\Omega$	
R284	3069682970	6.8k $\Omega$	
R285	3069562970	5.6k $\Omega$	
R286-R288	3069103970	10k $\Omega$	
R301	3069102970	1k $\Omega$	
R302	3069332970	3.3k $\Omega$	
R303	3069102970	1k $\Omega$	
R304	3069562970	5.6k $\Omega$	
R305	3069222970	22k $\Omega$	
R321	3069222970	2.2k $\Omega$	

Ref. No	Part No.	Description	Remark
R322	3069682970	6.8kΩ	
R401	3069222970	2.2kΩ	
R402	3069221970	220Ω	
R403	3069473970	47kΩ	
R404	3069103970	10kΩ	
R405	3069562970	5.6kΩ	
R406	3069473970	47kΩ	
R451	3069472970	4.7Ω	
R452	3069393970	39kΩ	
R453/R454	3069220970	22Ω	
R455	3069470970	47Ω	
R501L/R	3069473970	47kΩ	
R502	3069222970	2.2kΩ	
R503/R504	3069224970	220kΩ	
R505	3069334970	330kΩ	
R506	3069103970	10kΩ	
R601	3069102970	1kΩ	
R602	3069272970	2.7kΩ	
R603	3069103970	10kΩ	
R604	3069272970	2.7kΩ	
R605	3069103970	10kΩ	
R606/R607	3069102970	1kΩ	
R608	.	Not used !	
R609	3069473970	47kΩ	
R610	3069471970	470Ω	
R611	3069103970	10kΩ	
R612-R650	.	Not used !	
R651	3069473970	47kΩ	
R652	3069911970	910Ω	
R653	3069272970	2.7kΩ	
R654	3069822970	8.2kΩ	
R700-R702	3069222970	2.2kΩ	
R703/R704	3069103970	10kΩ	
R705-R707	3069222970	2.2kΩ	
R708-R715	3069473970	47kΩ	
R716	3069202970	2kΩ	
R717	3069103970	10kΩ	
R718	3069123970	12kΩ	
R719	.	Not used !	
R720	3069103970	10kΩ	
R721	3069563970	56kΩ	
R722-R724	3069103970	10kΩ	
R725	3069473970	47kΩ	
R726	3069224970	220kΩ	
R727	3069223970	22kΩ	
R801	3039100472	10Ω 1W	
VR101L/R	3248020343	20K(B)	
VR201L/R	3248020343	20K(B)	
VR251L/R	3248020343	20K(B)	
VR281L/R	3248010343	10K(B)	
VR282L/R	3248050343	50K(B)	
Transistors			
Q101L/R	2208622108	DTC 114TS	
Q102	2008609102	MP6 A06	

Ref. No	Part No.	Description	Remark
Q151L/R	2208622108	DTC 114TS	
Q152L/R	2208622108	DTC 114TS	
Q153L/R	2008610102	2SD 1302S	
Q200L/R	2208622108	DTC 114TS	
-Q203L/R			
Q204L/R	2208622108	DTC 114TS	
Q205L/R	2208622108	DTC 114TS	
Q301	2208206105	KTA 1015Y	
Q302/Q305	2208622105	KTA 114YS	
Q303/Q306	2208622106	KTC 114YS	
Q304	2208606113	MPS A56	
Q401-Q403	2208606113	MPS A56	
Q404/Q405	2208622108	DTC 114TS	
Q406-Q408	2208206105	KTA 1015Y	
Q409-Q411	2208622106	DTC 114YS	
Q412	2208606114	MPS A06	
Q413-Q450	.	Not used !	
Q451	2028406117	KTC 2236AY	
Q501/Q502	2208622108	DTC 114TS	
Q601	2208606104	KTC 1815Y	
Q602	2208606114	MPS A06	
Q603	2208606104	KTC 1815Y	
Q604	2208606114	MPS A06	
Q605	2208622108	DTC 114TS	
Q606-Q650	.	Not used !	
Q651	2208606113	MPS A56	
Q652	2208206105	KTA 1015Y	
Q653	2208622106	DTC 114YS	
Q654	2208606114	MPS A06	
Q701	2208606113	MPS A06	
Q702	2208622108	DTC 114TS	
Q703	2208622105	DTA 114YS	
Q704-Q706	2208606112	2SD 1302S	
Q707/Q708	2208606113	MPS A56	
Q709/Q710	2208622108	DTC 114TS	
Q711	2208606113	MPS A56	
Q712	2208622108	DTC 114TS	
Q713	.	Not used !	
Q714/Q715	2208622108	DTC 114TS	
Other			
.	3938101830	Resonator 4.0MHz	

Front Board 4002318900						
Capacitors						
C185	3579104534	Ceramic	0.1μF	50V	Z	Head Phone B' D
C801L/R	3479247971	Electric SA	4.7μF	50V	M	
C802L/R	.	Not used !				
C803L/R	3579221130	Ceramic	220pF	50V	J	
C804L/R	3579330130	Ceramic	33pF	50V	J	
C805L/R	3479247971	Electric SA	4.7μF	50V	M	
C806/C807	3479210121	Electric SA	100μF	10V	M	

Ref. No	Part No.	Description	Remark
C951L/R	3479247971	Electric SA 4.7μF 50V M	
C952L/R	3479247971	Electric SA 4.7μF 50V M	
C953L/R	3479210071	Electric SA 10μF 50V M	
Connectors			
SNT151	4428525390	Cable Holder 5P	
SNT181	4428525370	Cable Holder 3P	
SNT201	4428525400	Cable Holder 6P	
SNT301	4428525370	Cable Holder 3P	
SNT401	4428525390	Cable Holder 5P	
SNT402	4428525380	Cable Holder 4P	
SNT601	4428525410	Cable Holder 7P	
SNT602	4428525370	Cable Holder 3P	
SNT603	4428525370	Cable Holder 3P	
SNT603J	4428525370	Cable Holder 3P	
SNT801	4428525420	Cable Holder 8P	
SNT801J	4428525420	Cable Holder 8P	
.	4119203206	Cable Slot 3P 200mm	
.	4119203366	Cable Slot 3P 360mm	
.	4119204306	Cable Slot 4P 300mm	
.	4119205246	Cable Slot 5P 240mm	
.	4119206206	Cable Slot 6P 200mm	
.	4119207206	Cable Slot 7P 200mm	
.	4119208146	Cable Slot 8P 140mm	
Diodes			
D960L/R	2371124501	LED SLR-34YCD	
D951/D952	2058306101	1N4148	
D951L/R	2371124501	LED SLR-34YCD	
-D954L/R			
D955L/R	2371124701	LED SLR-34URC	
-D957L/R			
D958	2371124701	LED SLR-34URC	
D959-D961	2371124501	LED SLR-34YCD	
D962	2371124701	LED SLR-34 URC	
D963-D966	2371124501	LED SLR-34YCD	
IC's			
IC801	2168206103	KIA 45559S	
IC901L/R	2168010107	AN 6882	
Resistors			
R191	3069221970	220Ω	
R192-R195	3069102970	1kΩ	
R801	3069471970	470Ω	
R802L	3069472970	4.7kΩ	
R803L/R	3069104970	100kΩ	
R804L/R	3069102970	1kΩ	
R805L/R	3069473970	47kΩ	
R806L/R	3069102970	1kΩ	
R909	3069102970	1kΩ	
R951-R954	3069220970	22Ω	
R955	3069161970	160Ω	
R956	3069102970	1kΩ	
R957	3069100970	10Ω	
R958/R960	.	Not used !	

Ref. No	Part No.	Description	Remark
R959	3069102970	1kΩ	
R961L/R	3069223970	22kΩ	
R962L/R	3069153970	15kΩ	
R963L/R	3069522970	5.2kΩ	
R964L/R	3069104970	100kΩ	
R965L/R	3069472970	4.7kΩ	
R966L/R	3069183970	18kΩ	

Trans Board 4002318600			
Capacitor			
C3	3549472407	Mylar 0.047μF 400V J	
Fuses			
.	5508302035	TIA 250V	C,D,F
.	5508111130	T200mA 250V	B
.	5508111430	T315mA 250V	B
.	9057078558	Label T200mA 250V	B
.	9057078560	Label T315mA 250V	B
.	4255001010	Clip	
Others			
CNT001	4358105221	Conector, Ass'y 5P	
.	2828077407	Power Transformer, 230V/50Hz	D
.	2828077907	Power Transformer, 110V/60Hz, 220V/50Hz	B



## Mechanical Parts List (Cabinet & Chassis)

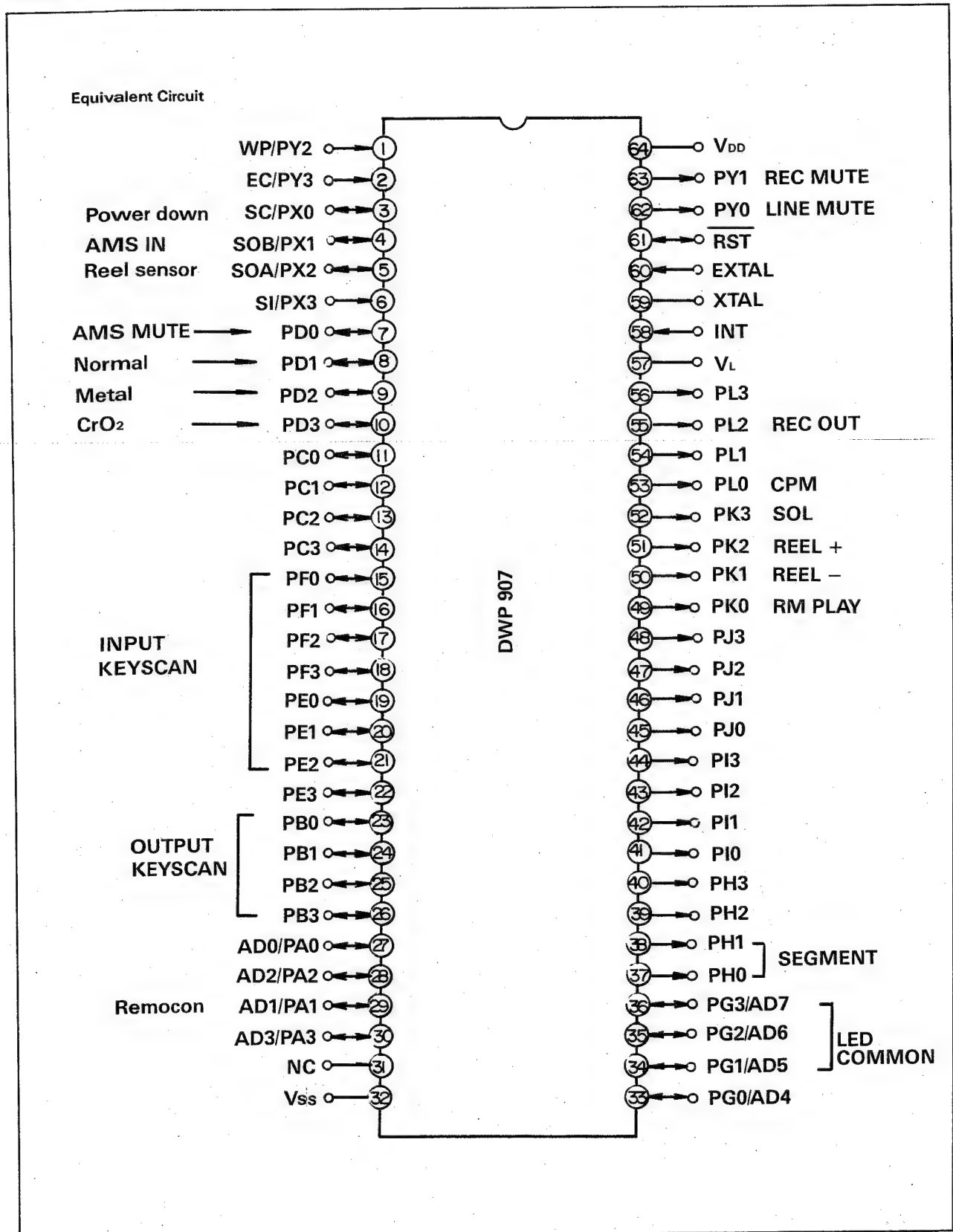
No.	Description	Parts No.	Q'ty	Remark
1	Window Deck	04855032011	1	
2	Door Deck	048563004711	1	
3	Window LED	04855033911	1	
4	Capacitor Decor, C	048543034811	1	
5	Diffuser LED	8535031510	1	
6	Shield Fence, VR	6165137810	1	
7	Capacitor Decor, A	048543029811	1	A,B
8	Knob Rotary, A	048543030011	2	
9	Badge	048535031911	1	
(9)	Badge	048535032511	1	Domestic
10	Button Power	8545074310	1	
11	Spring Button Power	6555004380	1	
12	Knob Rotary, B	048543030111	1	
13	ARM Eject	7013000410	1	
14	Knob Eject	8545076110	1	
15	Switch Slide	4618006710	1	
16	Knob Slide	8545076510	1	
17	Bracket Jack Phone	6505098810	2	
18	Jack Phone	4438005010	1	
19	Spring Eject Button	6555005630	1	
20	Panel Front	048501018911	1	
21	Mechanism Deck	5708011410	1	
22	Bracket Mechanism, R	6503017010	1	
23	Bracket Mechanism, L	6503016920	1	
24	Bracket Eject ARM	6503017210	1	
25	Screw Bushing	8155001310	2	
26	Bracket Mechanism, B	6503017110	1	
27	Damper Air	6308001510	1	
28	Spring Door	6555003110	1	
29	Spring Eject	6555004420	1	
30	Cover Mechanism	046123407711	1	
31	Case Cassette	8562001910	1	A,B
32	Belt	7165000610	1	
33	Counter Tape	5318003010	1	
34	Bracket Counter Tape	6503017410	1	
35	Holder LED	6513004310	1	
36	Bezel	048525007411	1	A,B
37	Button Tact, B	048543030211	1	Domestic, A
38	Bracket Support	6505108210	1	Domestic, A
39	Jack MIC	4438005510	1	
40	Shield Fence	6165137510	1	
41	Button Tact, C	8543030410	1	
42	VR Rotary	3208058410	1	
43	Switch Tact	4658003710	9	A,B
44	VR Rotary	3208059810	1	
45	VR Rotary	3208060110	1	
46	Switch Push	4628054210	1	Domestic
47	Foot, Gold	046033101711	2	Domestic
(47)	Foot, Gold	046033101611	2	
48	Foot, Gold	046033101711	1	Domestic
(48)	Foot, Gold	6033101810	1	A
(48)	Foot, Gold	046033101811	1	B,C,D,E,F
49	Foot, Gold	046033101711	1	Domestic
(49)	Foot, Gold	6033101610	1	A
(49)	Foot, Gold	046033101611	1	B,C,D,E,F
50	Cover Bottom	6122416010	1	
51	Frame Side, R	6123620120	1	
52	Frame Side, L	6122630610	1	
53	Cover Top, Black	046122020311	1	
54	Shaft Switch	6303001610	1	
55	Switch Power	4628056710	1	
56	Cable Tie	6528000410	1	
57	AC Socket, Black	4448003010	2	DOM,C,D,E,F
(57)	AC Socket, Black	4448003110	2	A,B

## Mechanical Part List (Deck Mechanism Ass'y)

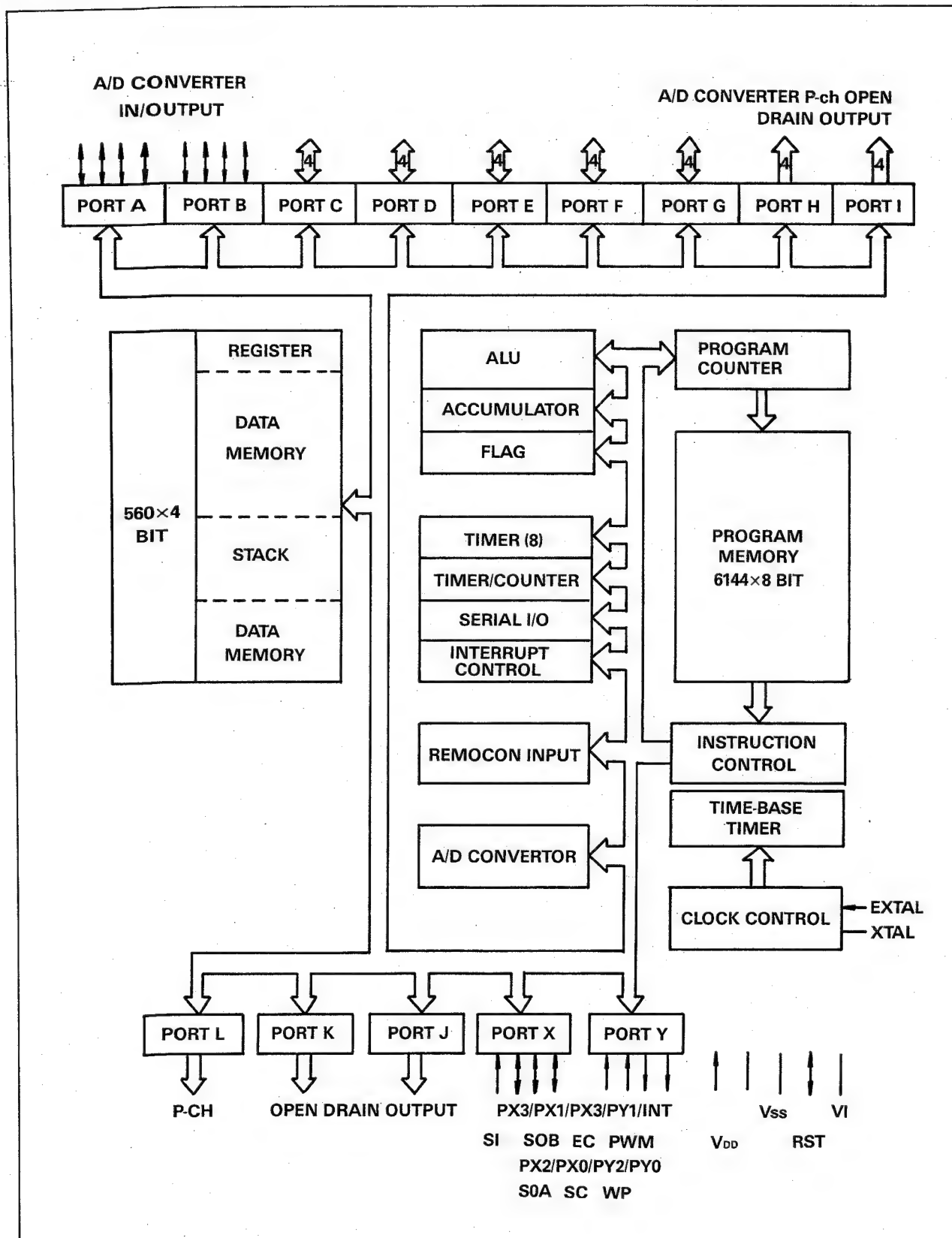
No.	Part No.	Description	Q'ty	Remark
1	.	Not used !		
2	F511-457	Block Chassis	1	
2-1	F517-049	Block Idler	1	
2-2	F564-280	Block Motor Reel	1	
2-3	F612-156	Block Base Chassis	1	
2-4	F623-037	Block Base Reel	2	
2-5/2-6	.	Not used !		
2-7	FG156-11A	Screw	2	
2-8	FJ111-17	Washer	2	
2-9/2-10	.	Not used !		
2-11	UJ12V-11	Polyslider	2	
3	F513-625	Block Plate Head	1	
3-1/3-2	.	Not used !		
3-3	FC52E-44	Base Head	1	
3-4/3-7	.	Not used !		
3-8	FK26N-14	Spring Base Head	1	
3-9	FU16S-11	R/P Head (HAYEH4405A)	1	
3-10	FU192-11	E Head	1	
3-11	WH55L-05A	Connector Wire (R/P)	1	
3-12	WH55M-05A	Connector Wire (E)	1	
4	F525-269	Block Motor Main	1	
5	F567-350	Block PCB Control	1	
5-1/5-12	.	Not used !		
5-13	AW13F-00	Sensor (SPI 335-34-FG)	2	
5-14/5-16	.	Not used !		
5-17	UE16E-11	Push Switch	4	
6	.	Not used !		
7	FC39S-33	Arm Eject Preventive (L)	1	
8	FC52H-12	Spring Cassette Pushing	1	
9-11	.	Not used !		
12	FD45G-12	Arm Play	1	
13	.	Not used !		
14	FD45B-15	Gear Cam	1	
15	FD44T-14	Lever (REC SW)	2	
16	FD44Y-12	Lever (Pack SW)	1	
17	FD44V-12	Lever (Metal SW)	1	
18	FF17W-21	Belt Main	1	
19	.	Not used !		
20	FJ111-30	Polyslider	1	
21/22	.	Not used !		
23	FJ111-14	Polyslider	1	
24	.	Not used !		
25	FK28M-15	Spring Eject Preventive (L)	1	
26	FK28R-11	Spring Slide	1	
27/28	.	Not used !		
29	FR22D-11	Ass'y Flywheel	1	
31	FR20L-21A	Ass'y Pinch Roller (R)	1	
32-35	.	Not used !		
36	FG114-14	Screw	2	
37	UG15S-11A	Screw	1	
38	.	Not used !		
39	UG13U-15	E-Ring	1	
40	UG12H-16	Screw	1	
41	.	Not used !		
42	.	Not used !		
43	FF17C-12	Cushion	1	
44-50	.	Not used !		
51	F765-263	Block Solenoid	1	
52	FL39H-12A	Iron Core	1	
53	FL39K-12	Plunger		

# IC Lead Identification and Internal Diagram

DWP907: IC701



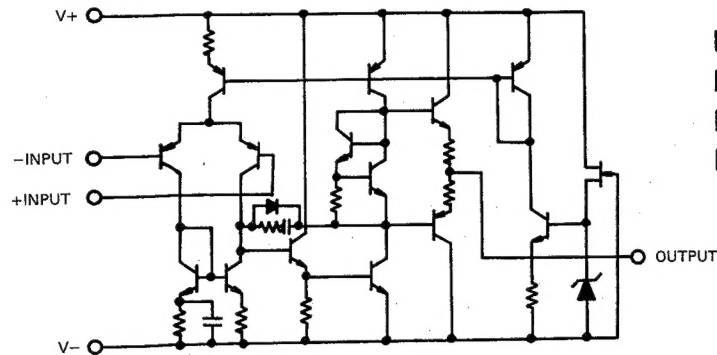
## CPU BLOCK DIAGRAM



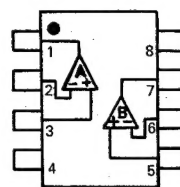


# NJM 2068 — (PB AMP): IC101

## Equivalent Circuit



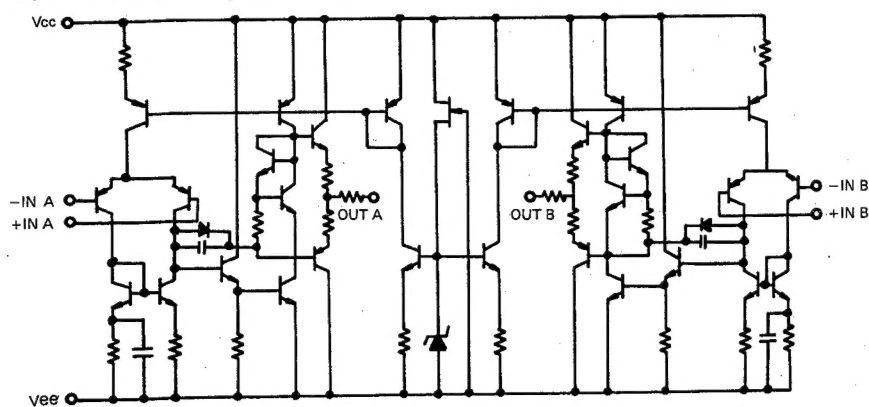
## (TOP VIEW)



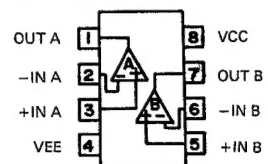
1. A OUTPUT
2. A - INPUT
3. A + INPUT
4. V-
5. B+ INPUT
6. B- INPUT
7. B OUTPUT
8. V+

# KIA 4559S (6559) — REC AMP, HEADPHONE AMP, MIC AMP : IC181, IC201, IC801

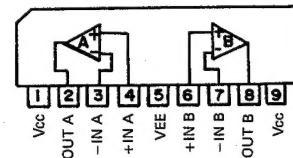
## Equivalent Circuit



## KIA 4559P, KIA 4559F

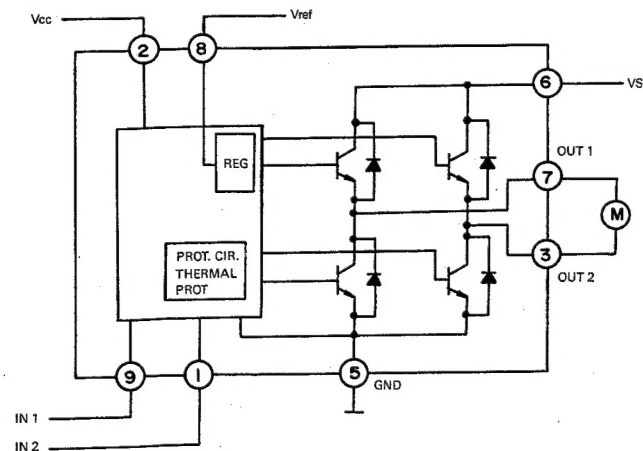


## KIA 4559S

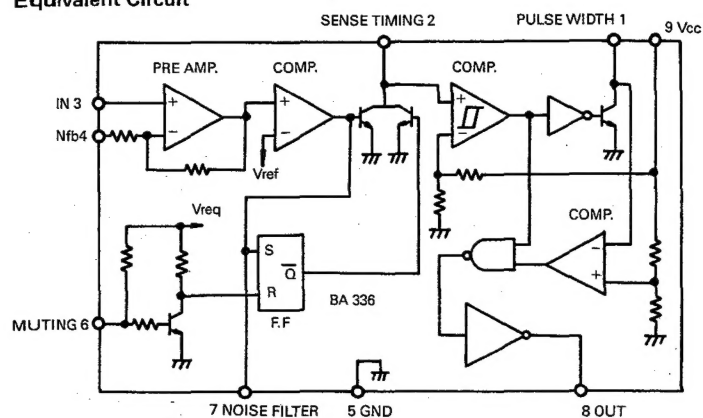


# TA 7291S (MOTOR DRIVER): IC601

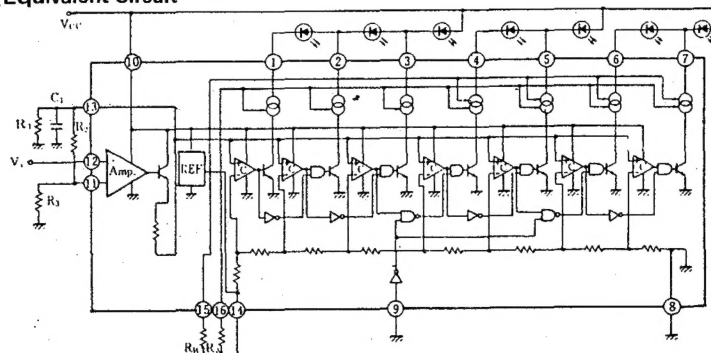
## Equivalent Circuit



### Equivalent Circuit

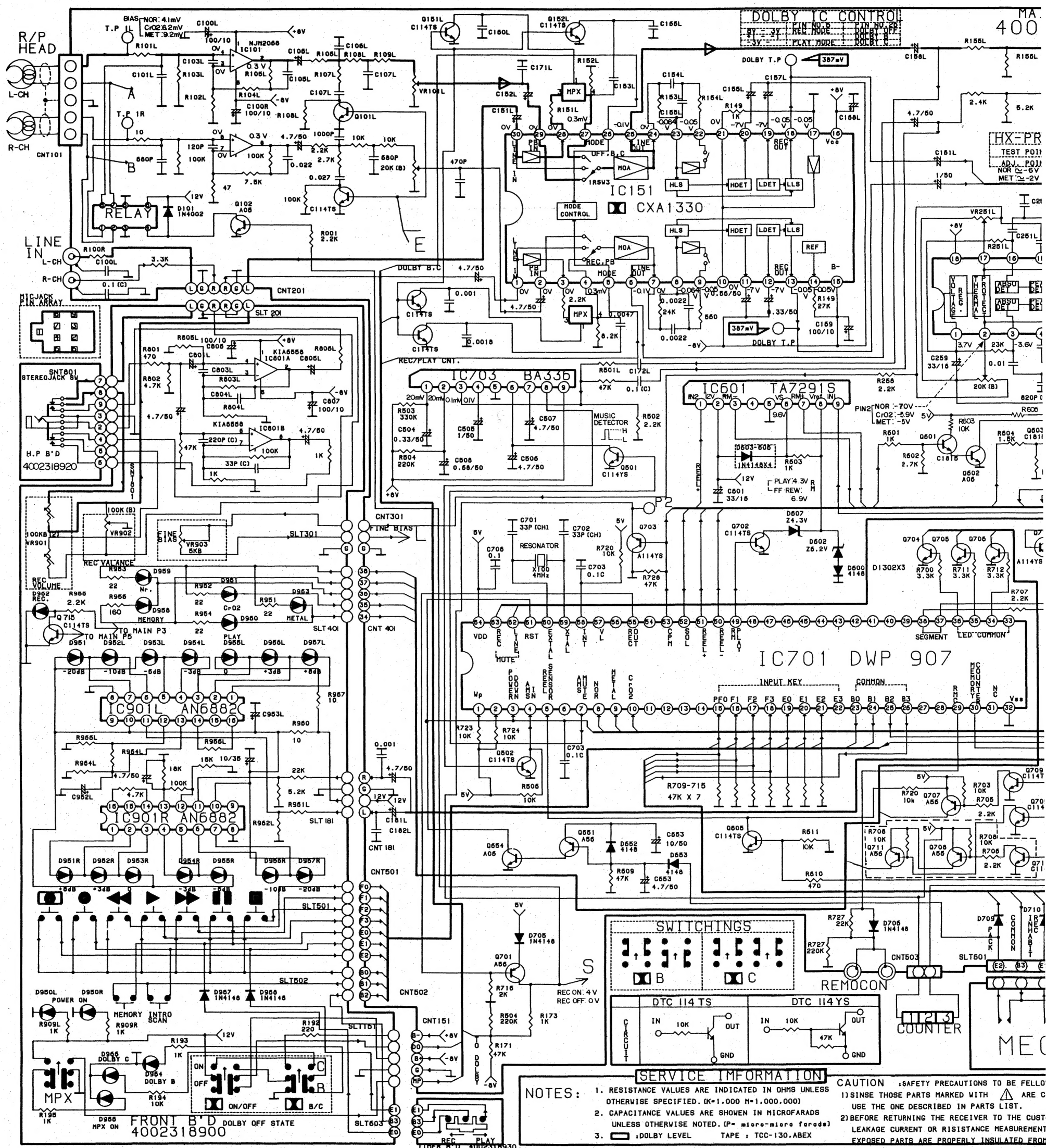


### Equivalent Circuit




## D


# DS-3010C



NOTES:

1. RESISTANCE VALUES ARE INDICATED IN OHMS UNLESS OTHERWISE SPECIFIED. (K=1,000 M=1,000,000)
2. CAPACITANCE VALUES ARE SHOWN IN MICROFARADS UNLESS OTHERWISE NOTED. (P= pico-micro farads)
3.  : DOLBY LEVEL TAPE : TCC-130.ABEX

**CAUTION** SAFETY PRECAUTIONS TO BE FOLLOWED

1) SINCE THOSE PARTS MARKED WITH  ARE CAPACITORS, USE THE ONE DESCRIBED IN PARTS LIST.

2) BEFORE RETURNING THE RECEIVER TO THE CUSTOMER, LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE. EXPOSED PARTS ARE PROPERLY INSULATED FROM EACH OTHER.

# E F G

## Diagram OC

